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EXAMINER

SHAFFER, ERIC T

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3623

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

## Application No.

09/386,339

## Applicant(s)

KATSURABAYASHI ET AL.

## Examiner

Eric Shaffer

## Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

1. This communication is in response to the appeals brief filed August 23, 2004.

***Response to Amendment***

2. Applicant's arguments with respect to claims 1 - 27 have been considered and deemed persuasive. The previous rejection has been removed and replaced with a new series of rejections incorporating new art. Applicant has not amended or cancelled any claims and has not added any new claims. Claims 1 - 27 are pending and are prosecuted in the response set out below.

3. In view of the Appeal Brief filed on August 23, 2004, PROSECUTION IS HEREBY REOPENED. The new office action is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 - 13, 15-20, 22, and 24 - 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andleigh (WO 99/34307) in view of Brooks (US 5,825,869).

As per claims 1, 25 and 26, Andleigh teaches a computer executing an optimum operator selection support system comprising:

a document management part that manages documents stored by said computer (“information to be stored and stored in a computer database may reside in numerous electronic documents”, page 1, lines 22 - 23), related to jobs (“extracts job titles from each of the listings, extracts the employer name from each listings, extracts work highlights from each of the listings”, page 19, lines 27 - 29) and (“extracts work highlights from each of the listings”, page 19, line 28 - 29), with additional information on operators who generated the documents (“information about people and their specific talents and skills may reside in electronic documents, such as resumes, performance appraisals, design documents”, page 1, lines 23- 24) and (“the contact information section processor searches for and extracts the zip code, state, email address, city, street address, and name”, page 17, lines 21 - 23);

a document feature extraction part that extracts features of the respective documents generated by one operator from said document management part and extracts features from the

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respective document (“host computer uses extraction server to analyze, retrieve and store words and word groups from the electronic documents into a predefined structure in target database”, page 4, line 27 - 29), wherein an electronic document is generated by one operating a computer;

a job feature extraction part that extracts features of jobs of said operator (“extracts job titles from each of the listings, extracts the employer name from each listings, extracts work highlights from each of the listings”, page 19, lines 27 - 29) by detecting common features from a frequency of occurrence of terms the plurality of documents extracted by said document feature extraction part (“the pattern of experience listing, that is, if it is starting with a date or a job title, or employer name, repeats throughout the experience listing”, page 20, lines 15 - 16), wherein detection of repetition is a frequency of occurrence. Andleigh does not teach use by telephone operators.

Brooks teaches a skill evaluation system specifically for telephone operators, (“A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls. That is, for each call that is to be distributed, one or more skills that are relevant to efficient handling of the call are determined and then used to route the call to an appropriate individual”, column 4, lines 51 – 57). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Andleigh invention to the telephone call distribution functionality because

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this would increase the efficiency with which qualified professionals are assigned to service customers. Assigning the most qualified person to a job would increase the probability that the call would be handled correctly and would increase customer satisfaction. Allowing the call to be handled by the person with the strongest skill would also allow the call to be handled fast, thereby increasing efficiency, reducing costs, and improving the profitability of the firm.

As per claim 2, Andleigh teaches a task management part that analyzes job order relations based on electronic data transmitted/received among operators (“electronic documents such as resumes, performance appraisals”, page 1, line 24), and manages information on the job order relations wherein said job feature extraction part extracts the features of the jobs and roles of said operator based on the features of documents extracted by said document feature extraction part (“information about people and their specific talents and skills may reside in electronic documents”, page 1, lines 23 - 25), wherein performance appraisals and resumes provide information related to job orders. Andleigh does not teach use by telephone operators.

Brooks teaches a skill evaluation system specifically for telephone operators, (“A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls. That is, for each call that is to be distributed, one or more skills that are relevant to efficient handling of the call are determined and then used to route the call to an appropriate individual”, column 4, lines 51 – 57). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Andleigh invention to the telephone call distribution functionality because this would increase the efficiency with which qualified professionals are assigned to service customers. Assigning the most qualified person to a job would increase the probability that the call would be handled correctly and would increase customer satisfaction. Allowing the call to be handled by the person with the strongest skill would also allow the call to be handled fast, thereby increasing efficiency, reducing costs, and improving the profitability of the firm.

As per claims 3, 4 and 6, Andleigh teaches a computer wherein said job feature extraction part extracts the features of the jobs of said operator from the features of the documents extracted by said document feature extraction part and extracts the roles of said operator from the information on the job order relations managed by said task management part ("extracts job titles from each of the listings, extracts the employer name from each listings, extracts work highlights from each of the listings", page 19, lines 27 - 29). Andleigh does not teach conversation management.

Brooks teaches a conversation management invention that manages conversations among the operators by utilizing electronic data, ("A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls", column 4, line 51 - 57) that includes a conversation feature extraction part ("Additional information may be gathered by means of interactive voice response IVR input and database lookups", column 5, line 50 - 52) that extracts features of the conversations among the

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operators managed by said conversation management part, (“a match analysis report summarizes the calls all calls received by skill expression and shows the abandon rate per skill expression, which skill expressions are being requested most often, and the level of service provided for each skill expression”, column 6, line 38 - 42), wherein extraction is inherent in summarizing skills.

Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating data collected from conversations because many jobs and users work primarily over the telephone. Job descriptions and performance of these persons would naturally be documented by analyzing the voice content of the workers. Analyzing the conversations directly rather than add the additional step of translating the conversation into a document and then analyzing the document would be a faster and more accurate means for performing this extraction functionality when using conversations as a data source.

As per claim 5, Andleigh teaches a task management part that analyzes job order relations (“electronic documents such as resumes, performance appraisals”, page 1, line 24), including authority levels of responsible operators (“the job title”, page 19, line 24), based on electronic data transmitted/received among operators, and stored by said computer, and manages information on the job order relations, (“information about people and their specific talents and skills may reside in electronic documents”, page 1, lines 23 - 25), wherein performance appraisals are related to a performance on a job order;



a job feature extraction part that extracts roles of said operator to perform jobs, from job order relations extracted by said task management part, (“the pattern of experience listing, that is, if it is starting with a date or a job title, or employer name, repeats throughout the experience listing”, page 20, lines 15 - 16), wherein detection of repetition is a frequency of occurrence. Andleigh does not teach use by telephone operators.

Brooks teaches a skill evaluation system specifically for telephone operators, (“A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls. That is, for each call that is to be distributed, one or more skills that are relevant to efficient handling of the call are determined and then used to route the call to an appropriate individual”, column 4, lines 51 – 57). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Andleigh invention to the telephone call distribution functionality because this would increase the efficiency with which qualified professionals are assigned to service customers. Assigning the most qualified person to a job would increase the probability that the call would be handled correctly and would increase customer satisfaction. Allowing the call to be handled by the person with the strongest skill would also allow the call to be handled fast, thereby increasing efficiency, reducing costs, and improving the profitability of the firm.

As per claims 7 and 27, Andleigh teaches a computer comprising a job feature extraction part that extracts features of jobs of the operators and generates a job feature management table, including names and roles of responsible operators, from distribution of the conversations extracted by said conversation management part, (“extracts job titles from each of the listings, extracts the employer name from each listings, extracts work highlights from each of the listings”, page 19, lines 27 - 29). Andleigh does not teach conversation management.

Brooks teaches a conversation management part that manages conversations among the operators by utilizing electronic data, (“A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls”, column 4, line 51 - 57) and a conversation feature extraction part that extracts features of the conversations among the operators managed by said conversation management part, (“Additional information may be gathered by means of interactive voice response (IVR) input and database lookups. For example, customer database retrieval allows call-management to determine a customer history and customer preferences”, column 5, line 50 - 54), wherein retrieval is a form of extraction. Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating data collected from conversations because many jobs and users work primarily over the telephone. Job descriptions and

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performance of these persons would naturally be documented by analyzing the voice content of the workers. Analyzing the conversations directly rather than add the additional step of translating the conversation into a document and then analyzing the document would be a faster and more accurate means for performing this extraction functionality when using conversations as a data source.

As per claims 8, 9, 15 and 20, Andleigh teaches the computer further comprising a similar job search part that searches for similar jobs based on information extracted by said job feature extraction part, (“the semantic network provides a way of arranging all the concepts at the lowest level and then builds a taxonomy or network of higher level meta-concepts and categories”, page 10, lines 20 - 21), wherein semantics are similar words.

As per claims 10 and 11, Andleigh teaches a job structure generation part that generates a structure representing roles of operators related to a job, (“all job titles specific to the particular industry are stored in the knowledge database”, page 20, line 26). Andleigh does not teach use by telephone operators.

Brooks teaches a skill evaluation system specifically for telephone operators, (“A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls. That is, for each call that is to be distributed, one or more skills that are relevant to efficient handling of the call are determined and then used to route the call to an appropriate individual”, column 4, lines 51 – 57). Both

inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the Andleigh invention to the telephone call distribution functionality because this would increase the efficiency with which qualified professionals are assigned to service customers. Assigning the most qualified person to a job would increase the probability that the call would be handled correctly and would increase customer satisfaction. Allowing the call to be handled by the person with the strongest skill would also allow the call to be handled fast, thereby increasing efficiency, reducing costs, and improving the profitability of the firm.

As per claim 12, Andleigh teaches a document management system that extracts job skills from job and worker related documents. Andleigh does not teach an optimum selector that selects optimum members.

Brooks et al teaches a computer comprising an optimum operator selection part that selects optimum members based on information extracted by said job feature extraction part, ("each call is associated with a skill expression that identifies the skills that are relevant to efficient handling of the call. As previously noted, the preferred embodiment is one in which more than one relevant skill is identified, so that all of the factors that determine a best agent for handling a call can be considered", column 5, lines 42- 44). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating selection of an optimal employee

for a specific job because this would allow the best and most qualified person to be assigned to a job, which would maximize the probability that the job would be done with the lowest probability of errors and minimize the time it would take the person to perform the job because the job would be one in which they were highly qualified. This increase in efficiency would save time and minimize the cost of performing the job.

As per claim 13, Andleigh teaches a document management system that extracts job skills from job and worker related documents. Andleigh does not teach an inquiry system.

Brooks teaches an inquiry part that makes an inquiry to said job feature extraction part, ("a ResumeCode field that can be used as an identifier of the agent when the agents table is queried to look up the skills of the particular agent", column 9, lines 35 – 37);

a display information analysis part that analyzes response information to inquiry information by said inquiry part, and generates image information having a content to be easily understood, ("A "skill score" is indicative of the correlation between the attributes of the agents and the desired abilities for handling a particular call. That is, in this embodiment the skill score is a numeric measure of how well a particular agent's resume matches the skill expression associated with the call", column 11, lines 9 - 14), wherein a measure is a form of analysis. Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating an inquiry and a display of information because this would make the system easier for users to work with. Instead of displaying all information to all users, the inquiry would allow a user to specify exactly which

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information they wished to use, thereby making the search for information easier and more efficient.

As per claims 16 - 19, Andleigh teaches a document management system that extracts job skills from job and worker related documents. Andleigh does not teach identifying key persons that played a lead role in handling a job.

Brooks teaches a key-person search part that detects an operator who played a leading role in a job handled by a plurality of operators, and extracts documents based on the similar role, ("this skill commonality may be considered as creating a "team." For example, a team may be formed by designating a skill as "sales" and assigning a skill level from 1 to 9, with an agent having a skill level of 1 being considered a novice and an agent who has achieved a skill level of 9 being considered a team leader", column 9, lines 19 - 23). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating the ability to identify key persons because such a system would indicate who the most valuable persons are with respect to the subject at hand. This defining of subject matter experts would be another means to ensure that the best, most qualified person for a specific job would be assigned to perform that job, thereby lowering cost and reducing the time necessary to perform the job.

As per claim 22, Andleigh teaches a document management system that extracts job skills from job and worker related documents. Andleigh does not teach a quotation detection and deletion part.

Brooks teaches a mail quotation detection and deletion part that deletes a quotation from another operator's remark, from conversation information managed by said conversation management part, ("The transaction dispatcher also causes the queue controller 50 to delete the corresponding entry in the transaction queue 56", column 8, lines 63 - 65). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating a quotation capability because this would allow the user to delete comments that were wrong or were no longer accurate at a future point in time. This would enable the comments that are kept to be kept up to date and relevant.

As per claim 24, Andleigh teaches a document management system that extracts job skills from job and worker related documents. Andleigh does not teach an important member detection part to detect an unregistered person.

Brooks teaches an important member detection part that detects a person who is not registered by said conversation management part as a member to conduct a job but significantly related to the job for execution of the job, ("Excluded flags may be identified in the resume-details table to denote whether or not a particular skill is an "excluded skill" for a particular agent. Excluded skills are skills in the agent's resume that the agent is not permitted to handle under any circumstances", column 9, line 66 – column 10, line 3). Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating registration detection because this would limit the ability of a user who was not registered. Requiring registration would keep track of the specific users who were accessing specific information and restrict access to sensitive information, thereby enhancing security of the system and reducing the costs of security breeches to the system.

6. Claims 14, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andleigh (US 5,825,869) in view of Brooks (US 5,825,869) and in further view of Machin et al (US 6,038,544).

As per claim 14, Andleigh teaches a call management system and method that screens incoming telephone calls and then assigns incoming calls to operators. The device inputs, stores and searches a database of operator resumes in order to match an operator with an incoming call. The device can manage documents, extract data from documents, assign skill score level scores and store voice data. Andleigh does not teach conversation management.

Brooks teaches a conversation management invention that manages conversations among the operators by utilizing electronic data, ("A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls", column 4, line 51 - 57) that includes a conversation feature extraction part ("Additional information may be gathered by means of interactive voice response IVR input and



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database lookups”, column 5, line 50 - 52) that extracts features of the conversations among the operators managed by said conversation management part, (“a match analysis report summarizes the calls all calls received by skill expression and shows the abandon rate per skill expression, which skill expressions are being requested most often, and the level of service provided for each skill expression”, column 6, line 38 - 42), wherein extraction is inherent in summarizing skills because without the ability to extract some information, there would be no information to perform a summarization upon and the process of summarization would be pointless. Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating data collected from conversations because many jobs and users work primarily over the telephone. Job descriptions and performance of these persons would naturally be documented by analyzing the voice content of the workers. Analyzing the conversations directly rather than add the additional step of translating the conversation into a document and then analyzing the document would be a faster and more accurate means for performing this extraction functionality when using conversations as a data source.

Neither Andleigh nor Brooks teach generating graphs, recording voice conversations or allowing operators to input comments.

Machin et al teaches an operator performance evaluation system and method that rates and ranks operators. The device also plots performance data on a graph, allows operators to input additional information as remarks, and also receives and records input conversation voice

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data in a digital format (figure 5 and column 5, lines 37-38). All three are analogous art because all are in the field of performance evaluation management.

It would be obvious to enhance the Andleigh and Brooks combination invention with the graphical display of the Machin et al device in order to make the strengths of each operator's more easily visible in a simple format. This would enable the user to evaluate an operator in less time and with less effort and therefore more efficiently.

As per claim 21, Andleigh teaches the call management system and method that screens incoming telephone calls and then assigns incoming calls to operators. The device inputs, stores and searches a database of operator resumes in order to match an operator with an incoming call. The device can manage documents, extract data from documents, assign skill score level scores and store voice data. Andleigh does not teach conversation management.

Brooks teaches a conversation management invention that manages conversations among the operators by utilizing electronic data, ("A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls", column 4, line 51 - 57) that includes a conversation feature extraction part ("Additional information may be gathered by means of interactive voice response IVR input and database lookups", column 5, line 50 - 52) that extracts features of the conversations among the operators managed by said conversation management part, ("a match analysis report summarizes the calls all calls received by skill expression and shows the abandon rate per skill expression, which skill expressions are being requested most often, and the level of service provided for each

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skill expression”, column 6, line 38 - 42), wherein extraction is inherent in summarizing skills because without the ability to extract some information, there would be no information to perform a summarization upon and the process of summarization would be pointless. Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating data collected from conversations because many jobs and users work primarily over the telephone. Job descriptions and performance of these persons would naturally be documented by analyzing the voice content of the workers. Analyzing the conversations directly rather than add the additional step of translating the conversation into a document and then analyzing the document would be a faster and more accurate means for performing this extraction functionality when using conversations as a data source.

Neither Andleigh nor Brooks teach generating graphs, recording voice conversations or allowing operators to input comments.

Machin et al teaches the optimum operator selection support system that allows for the input of voice conversations (“memory may store a version of responses as digitized sound files, so that the user can listen to the response to assess non-textual information in order to make a proper selection”, column 4, lines 28 - 31). Machin also teaches entering user remarks, (“the user selects an appropriate response, enters caller information, enters comments or notes concerning

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call 18, or provides other information to respond to call” (column 3, lines 47 - 48). All three are analogous art because all are in the field of performance evaluation management.

It would be obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh and Brooks combination device by allowing the call center to record the voice of an operator making remarks because this would allow the operator to associate pertinent data regarding the call with the actual call itself. This would enable the operator to remind themselves of pertinent facts surrounding the call at the time the call was received and enhance customer service.

As per claim 23, Andleigh teaches an operator selection support system that uses job description, lists and resumes to assign an operator to a call. While the Brooks reference extracts features from one document, it does not specifically teach the extraction from a plurality of documents. Andleigh does not teach conversation management.

Brooks teaches a conversation management invention that manages conversations among the operators by utilizing electronic data, (“A call-management method and system for distributing calls to a plurality of individuals, such as automatic call distribution (ACD) agents, include routing calls to the individuals based upon a correlation of attributes of the individuals with calls that are tagged with identification of abilities that are advantageous to efficiently processing the calls”, column 4, line 51 - 57) that includes a conversation feature extraction part (“Additional information may be gathered by means of interactive voice response IVR input and database lookups”, column 5, line 50 - 52) that extracts features of the conversations among the operators managed by said conversation management part, (“a match analysis report summarizes the calls all calls received by skill expression and shows the abandon rate per skill expression,

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which skill expressions are being requested most often, and the level of service provided for each skill expression”, column 6, line 38 - 42), wherein extraction is inherent in summarizing skills because without the ability to extract some information, there would be no information to perform a summarization upon and the process of summarization would be pointless. Both inventions are analogous art because they both teach extraction of worker and skill data from a written or oral record of the work a worker has done and compiling it in a table.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh invention by incorporating data collected from conversations because many jobs and users work primarily over the telephone. Job descriptions and performance of these persons would naturally be documented by analyzing the voice content of the workers. Analyzing the conversations directly rather than add the additional step of translating the conversation into a document and then analyzing the document would be a faster and more accurate means for performing this extraction functionality when using conversations as a data source.

Neither Andleigh nor Brooks teach operator entry remarks.

Operator's entering remarks is taught by Machin et al, which recites “the user selects an appropriate response, enters caller information, enters comments or notes concerning call 18, or provides other information to respond to call” (column 3, lines 47 - 48). All three are analogous art because all are in the field of performance evaluation management.

It would be obvious to one of ordinary skill in the art at the time the invention was made to enhance the Andleigh and Brooks combination device by allowing the operator to add comments or remarks as a point of future reference and to provide a caller history that would

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enable another operator to have an instant body of knowledge of the case surrounding the call, which would increase customer service and customer satisfaction. It would also allow users to leave advice or reminders with the documentation, thereby insuring continuity if the person who had performed the job were to leave and be replaced by a person that did not know anything about the job. This would prevent the new person from repeating mistakes or having to learn critical aspects of the specific job.

***Response to Amendments***

7. Applicant's arguments with respect to claims 1 - 27 have been considered but are moot in view of the new ground(s) of rejection.

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***Conclusion***

8. No claims were allowed and all claims were rejected.
9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kirsch al (US 5,983,216) – Word recognition and counting  
Kucera (US 4,724,523) – Document scanning and word recognition  
Kucera (US 4,864,501) – Document scanning and word recognition  
Kucera (US 4,773,009) – Document scanning and word recognition  
Sundaresan et al (US 6,539,376) – Word recognition and data mining  
Driscoll (S 5,576,954) – Word recognition and data mining  
Kirsch (US 5,569,732) - Word recognition and counting

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric Shaffer whose telephone number is (703) 305-5283. The Examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (703) 305-9643.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:  
Commissioner of Patents and Trademarks  
Washington D.C. 20231

Or faxed to:


(703) 746-7238 [After Final communications, labeled "Box AF"]

(703) 746-7239 [Official communications]

(703) 706-9124 [Informal/Draft communications, labeled  
"PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, VA, 7<sup>th</sup> floor receptionist.

ETS  
November 15, 2004

  
**TARIQ R. HAFIZ**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 36